

**TRANSACTIONS**  
OF THE ASME

ASME AM-5  
ANNUAL

*January 1960*  
**SOCIETY RECORDS**

*Indexes to Publications for 1959*

WHERE TO FIND THE ASME TRANSACTIONS IN THE UNITED STATES AND IN OTHER COUNTRIES • INDEXES TO ASME PAPERS AND PUBLICATIONS • INDEX TO MECHANICAL ENGINEERING • INDEX TO THE JOURNAL OF ENGINEERING FOR POWER • INDEX TO THE JOURNAL OF ENGINEERING FOR INDUSTRY • INDEX TO THE JOURNAL OF HEAT TRANSFER • INDEX TO THE JOURNAL OF BASIC ENGINEERING • INDEX TO THE JOURNAL OF APPLIED MECHANICS

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# TRANSACTIONS OF THE ASME

January 1960  
**SOCIETY RECORDS**  
VOLUME 82 JANUARY 1960

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TRANSACTIONS OF THE ASME  
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# Where you will find the ASME Transactions

## In United States and Territories

### Alabama

Auburn.....Alabama Polytechnic Institute  
Engineering Library  
Birmingham.....Public Library  
University.....University of Alabama  
Engineering Library

### Arizona

Tucson.....University of Arizona  
Library  
Mech. Engrg. Dept. Library

### Arkansas

Fayetteville.....University of Arkansas  
Engineering Library

### California

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General Library—Serials Dept.  
Davis.....University of California  
College of Agriculture Library  
Long Beach.....Public Library  
Los Angeles.....Public Library—Serials Division  
University of Southern California  
Engineering Library  
Monterey.....U.S. Naval Postgraduate School  
Library  
Oakland.....Public Library  
Pasadena.....California Institute of Technology  
Engineering Library  
Santa Clara.....University of Santa Clara  
Varsi Library  
San Diego.....Public Library  
San Diego State College  
Library  
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Public Library (Civic Center)  
Stanford Univ.....Stanford University  
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### Colorado

Boulder.....University of Colorado  
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Mary Reed Library  
Fort Collins.....Colorado State University  
Engineering Library  
Golden.....Colorado School of Mines  
Library

### Connecticut

Bridgeport.....\*Burroughs Public Library  
Hartford.....\*Public Library, Business and Technical  
Dept.  
New Haven.....Public Library  
Yale University  
Engineering Library, Dunham  
Laboratory  
Storrs.....University of Connecticut  
Wilbur Cross Library  
Engineering Library—Engrg. Bldg. I  
Waterbury.....Silas Bronson Library

### Delaware

Newark.....University of Delaware  
Library

### District of Columbia

Washington.....George Washington University  
Library  
Engineering Branch Library  
Catholic University of America  
Engineering and Mathematical Library  
Howard University  
Engineering and Architecture Library  
Library of Congress  
National Bureau of Standards  
Library

U. S. Patent Office  
Scientific Library

### Florida

Gainesville.....University of Florida  
Engineering Science Library  
Jacksonville.....Public Library

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Atlanta.....Carnegie Public Library  
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Honolulu.....University of Hawaii  
Library

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### Illinois

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Springfield.....Illinois State Library  
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Notre Dame.....University of Notre Dame  
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Library  
West Lafayette.....Purdue University  
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Des Moines.....\*Public Library  
Iowa City.....State University of Iowa  
Library—Serial Acquisitions Dept.

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Engineering Library  
Manhattan.....Kansas State University  
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Wichita.....Wichita City Library

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- Baltimore.....Johns Hopkins University  
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Washington University  
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Library  
Pratt Institute  
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\*Brooklyn Public Library—Science &  
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Buffalo and Erie County Public Library
- Ithaca.....Cornell University  
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- Jamaica, L.I.....\*Queens Borough Public Library
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Cooper Union  
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Rush Rhees Library
- Schenectady.....Union College  
Library
- Syracuse.....Public Library  
Syracuse University  
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Library



**North Carolina**

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**North Dakota**

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Library  
Grand Forks.....University of North Dakota  
Main Library  
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Dept.

**Ohio**

Ada.....Ohio Northern University  
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Akron.....Public Library  
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Library  
Science and Technology Library  
Athens.....Ohio University  
Library  
Cincinnati.....Public Library  
University of Cincinnati  
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Engineering Library  
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Fenn College  
Mech. Engrg. Dept. Library  
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Main Library  
Public Library  
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University of Dayton  
Mech. Engrg. Dept.  
Toledo.....\*Public Library  
University of Toledo  
Library  
Youngstown.....Public Library  
Youngstown University  
Library

**Oklahoma**

Norman.....University of Oklahoma  
Engineering Library  
Oklahoma City...Public Library  
Stillwater.....Oklahoma State University  
Library  
Tulsa.....\*Public Library  
University of Tulsa  
Library

**Oregon**

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Engineering Library  
Portland.....\*Portland Library Association

**Pennsylvania**

Allentown.....\*Free Library  
Bethlehem.....Lehigh University  
Library  
Easton.....Lafayette College  
Van Wickle Library  
Erie.....Public Library  
Haverford.....Haverford College  
Lewisburg.....Bucknell University  
Library  
Mech. Engrg. Dept. Library  
Philadelphia....Drexel Institute  
Library  
\*The Franklin Institute  
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University of Pennsylvania  
Library, School of Engineering  
Pittsburgh.....Carnegie Institute of Technology  
Library  
Carnegie Library  
\*Mellon Institute of Industrial Research  
Library

University of Pittsburgh  
George M. Bevier Engineering Library

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Swarthmore.....Swarthmore College  
Library  
University Park..Pennsylvania State University  
Engineering Library  
Villanova.....Villanova University  
Library

**Puerto Rico**

Mayaguez.....University of Puerto Rico

**Rhode Island**

Kingston.....University of Rhode Island  
Library  
Providence.....Brown University  
Physical Sciences Library  
Providence Engineering Society  
\*Public Library

**South Carolina**

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Mech. Engrg. Library  
Columbia.....University of South Carolina  
McKissick Memorial Library

**South Dakota**

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Library  
Rapid City.....South Dakota School of Mines and  
Technology  
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**Tennessee**

Knoxville.....University of Tennessee  
Engineering Library  
Memphis.....Goodwin Institute  
Nashville.....Joint University  
Library  
Engineering and Science Reading Room

**Texas**

Austin.....University of Texas  
Engineering Library—Taylor Hall  
Beaumont.....Lamar State College of Technology  
Spindletop Engineering Library  
College Station..Texas Agricultural and Mechanical College  
Engineers Library  
Cushing Library  
Dallas.....\*Public Library  
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Fondern Library  
El Paso.....Public Library  
Fort Worth.....Carnegie Public Library  
Houston.....Public Library  
Rice Institute  
Fondern Library  
University of Houston  
Libraries  
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Main Library  
Engineering Library

**Utah**

Salt Lake City...University of Utah  
Engineering Library

**Vermont**

Burlington.....University of Vermont  
Library  
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**Virginia**

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Engineering Library—Thornton Hall  
Lexington.....Virginia Military Institute  
Library  
Richmond.....Virginia State Library

**Washington**

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Science Library—Holland Library

- Seattle.....Public Library  
University of Washington  
Engineering Library  
Mech. Engrg. Library  
Spokane.....Public Library  
Tacoma.....Public Library
- West Virginia**  
Morgantown.....West Virginia University  
Library
- Wisconsin**  
Madison.....University of Wisconsin  
College of Engineering Library  
Milwaukee.....Marquette University  
Mech. Engrg. Dept.  
\*Public Library
- Wyoming**  
Laramie.....University of Wyoming  
Library—Periodical Section

## IN OTHER COUNTRIES

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- Buenos Aires.....Sociedad Cientifica

### Australia

- Adelaide.....Public Library of South Australia  
Brisbane.....University of Queensland  
Canberra.....Australian National University  
Melbourne.....Public Library of Victoria  
University of Melbourne  
Nedlands.....University of Western Australia  
Sydney.....Public Library of Sydney  
Public Library of New South Wales  
Sydney Technical College  
University of Sydney  
Wollongong.....Wollongong Technical College

### Belgium

- Louvain.....University of Louvain Library

### Brazil

- Sao Paulo.....Centro Technico de Aeronautica

### Canada

- Edmonton.....University of Alberta  
Hamilton.....Hamilton Public Library  
Kingston.....Queen's University  
Mech. Engrg. Dept. Library  
Montreal.....Ecole Polytechnique  
Engineering Institute of Canada  
Library  
McGill University  
Quebec.....Faculté des Sciences  
Saskatchewan.....University of Saskatchewan  
Toronto.....University of Toronto  
Library  
Mech. Engrg. Library  
Vancouver.....University of British Columbia  
Library—Applied Science Reading Room  
Mech. Engrg. Dept. Library  
Winnipeg.....University of Manitoba

### Chile

- Santiago.....Universidad de Chile Biblioteca Central  
Escuela de Ingenieria

### Cuba

- Havana.....Cuban Society of Engineers

### England

- Birmingham.....Birmingham Reference Library  
Bristol.....University of Bristol  
Cambridge.....University of Cambridge  
Coventry.....Gulson Central Library  
Hants.....Southampton University  
Leeds.....University of Leeds  
Liverpool.....Liverpool Engineering Society Library  
Liverpool Public Libraries  
London.....City and Guild College Library  
Institute of Marine Engineers  
Institution of Civil Engineers  
Institution of Electrical Engineers

- Institution of Mechanical Engineers  
Iron and Steel Institution  
Junior Institution of Engineers  
Patent Office Library  
Royal Aeronautical Society  
Science Museum Library  
Manchester.....Manchester Public Libraries  
Central Library  
Manchester College of Science and  
Technology  
University of Manchester  
Newcastle-upon-  
Tyne.....The North-East Coast Institution of  
Engineers and Shipbuilders  
Oxford.....Oxford University  
Bodleian Library  
Sheffield.....Sheffield Public Libraries

### France

- Paris.....Soc. des Ingénieurs Civils  
The American Library

### Germany

- Berlin-  
Charlottenburg.....Technische Universität Berlin  
Dusseldorf.....Vereines Deutscher Ingenieure  
Vereines Deutscher Eisenhüttenleute  
Hamburg.....Bibliothek der Ingenieurschule  
Hanover.....Bibliothek der Technischen Hochschule  
Karlsruhe.....Bibliothek der Technischen Hochschule  
München.....Bibliothek der Technischen Hochschule  
Deutsches Museums Bibliothek  
Stuttgart.....Bibliothek der Technischen Hochschule

### Holland

- Amsterdam.....Koninklyke Akademie von Wetenschappen  
National Luchtvaartlaboratorium  
Delft.....Bibliothek Technische Hogeschool  
The Hague.....Koninklyke Instituut van Ingenieurs  
Rotterdam.....Nationaal-Technische Instituut voor  
Scheepvaarten Luchtvaart

### India

- Bangalore.....Mysore Engineers Association  
Hawrah.....Bengal Engineering College Library  
Poona.....Poona College of Engineering

### Ireland

- Belfast.....Queen's University of Belfast

### Italy

- Napoli.....Facoltà di Ingegneria

### Japan

- Tokyo.....The Japan Society of Mechanical  
Engineers

### Mexico

- Mexico City.....Benjamin Franklin Library  
Ciudad Universitaria  
Facultad de Ingenieria

### New Zealand

- Christ Church.....Canterbury University College

### Scotland

- Glasgow.....Royal College of Science and Technology  
Mitchell Library

### South Africa

- Cape Town.....University of Cape Town Library  
Durban.....University of Natal  
Johannesburg.....South African Institute of Mechanical  
Engineers

### Sweden

- Gothenburg.....Chalmers University of Technology  
Stockholm.....Royal Institute of Technology Library

### Switzerland

- Zurich.....Eidg. Technische Hochschule Bibliothek  
L'Ecole Polytechnique Federale

### Turkey

- Ankara.....Middle East Technical University Library  
Istanbul.....Robert College Library

### Wales

- Cardiff.....Cardiff Public Libraries

# Indexes to ASME Papers and Publications

**T**HIS and the following pages will serve as a guide to the current publications of the ASME.

## Regular Society Publications, 1959

*Mechanical Engineering*, monthly (see index on page SR-103)

*ASME Transactions*: Quarterlies as follows:

Series A, *Journal of Engineering for Power* (see index on page SR-131)

Series B, *Journal of Engineering for Industry* (see index on page SR-135)

Series C, *Journal of Heat Transfer* (see index on page SR-139)

Series D, *Journal of Basic Engineering* (see index on page SR-143)

Series E, *Journal of Applied Mechanics* (see index on page SR-149)

*Journal of Applied Mathematics and Mechanics*, bimonthly

*ASME Mechanical Catalog*, 1960 edition

*Applied Mechanics Reviews*, monthly

*Smog News*, semimonthly

## Publications Issued in 1959

### BOOKS AND REPORTS

- 1958 ASME Transactions in three volumes
- Corrosion and Deposits in Boilers and Gas Turbines
- Fluid Meters—Their Theory and Application
- Instruments for the Study of Atmospheric Pollution
- Structural Damping
- Thermodynamic and Transport Properties of Gases, Liquids, and Solids
- Power Reactors
- Research and Test Reactors
- 1958 Report on Oil and Gas Engine Power Costs
- Spray Literature Abstracts

### SAFETY CODES

- Power Boilers with 1959 and Winter 1959 Addenda
- Material Specifications
- Low-Pressure Heating Boilers with 1959 Addenda
- Miniature Boilers
- Suggested Rules for Care of Power Boilers
- Unfired Pressure Vessel Code with 1959 and Winter 1959 Addenda
- Welding Qualifications with 1959 and Winter 1959 Addenda
- Book of Interpretations of ASME Boiler and Pressure Vessel Rules
- Gas Transmission and Distribution Piping Systems
- Oil Transportation Piping
- Petroleum Refining Piping
- Powered Industrial Trucks

### DRAFTING STANDARDS MANUAL

- Section 10, Metal Stampings
- Section 11, Fluid Power Diagrams

### PIPE, PIPE FITTINGS, AND THREADS

- Cast-Brass Solder-Joint Drainage Fittings
- Wrought-Steel and Wrought-Iron Pipe

### SMALL TOOLS AND MACHINE TOOL ELEMENTS

- Drill Drivers

- High Speed Steel and Cast Nonferrous Single Point Tools and Tool Holders
- Reamers
- Rotating Air Cylinders and Adapters
- Tape—Cut and Ground Threads

### SCREW THREADS AND THREADING TOOLS

- Class 5 Interference—Fit Thread
- Unified Miniature Screw Threads

### SYMBOLS

- Graphical Symbols for Welding
- Letter Symbols for Rocket Propulsion

### MISCELLANEOUS STANDARDS

- Illustrations for Publication and Projection
- Pallet Sizes

### INSTRUMENTS AND APPARATUS (Supplementary documents to Power Test Codes)

- Part 5, Chapter 4, Flow Measurement
- Part 11—Quality and Purity of Steam

## How to Find Papers Presented at 1959 ASME Meetings

**T**HE technical programs of the meetings of the Society and of its Professional Divisions have been published in *Mechanical Engineering* and may be located by consulting the index on pages SR-103 to SR-130. Many of these papers will be published in *Mechanical Engineering* or the *Transactions* and may be located by reference to the indexes of these publications.

## Publications Developed by the Technical Committees

**T**HE Society's technical committees, the first of which was organized many years ago and all of which have been continuously at work on codes, standards, research, and other special reports, have developed a series of publications of permanent value to the membership. The following list is presented here for record and for ready reference. This list covers the works of these committees together with dates of publications and prices. A discount of 20 per cent is allowed to ASME members on all publications except where statement "no discount allowed" appears after price.

### ASME AMERICAN STANDARDS

#### Bolt, Nut, and Rivet Proportions

- Hexagon and Slotted Head Cap Screws—Square Head Set Screws—Slotted Headless Set Screws (B18.6.2—1956), \$1.50
- Large Rivets (B18.4—1950; reaffirmed 1957), \$1.50
- Plow Bolts (B18.9—1958), \$1.50
- Round Head Bolts (B18.5—1952), \$1.50
- Slotted and Recessed Head Wood Screws (B18.6.1—1956), \$1.00
- Slotted and Recessed Tapping Screws and Metallic Drive Screws (B18.6.4—1958), \$4.00
- Small Solid Rivets (B18.1—1955), \$1.50
- Socket Head Cap Screws and Socket Set Screws (B18.3—1954), \$1.50
- Square and Hexagon Bolts and Nuts and Lag Bolts (B18.2—1955), \$2.00
- Track Bolts and Nuts (B18.10—1952), \$1.50
- High-Strength, High-Temperature Internal Wrenching Bolts (B18.8—1950; reaffirmed 1958), \$1.00

#### Gear Design, Dimensions, and Inspection

- Design for Fine-Pitch Worm Gearing (B6.9—1956), \$1.50

Fine-Pitch Straight Bevel Gears (B6.8—1950), \$1.00  
 Gear Nomenclature (B6.10—1954), \$1.50  
 Inspection of Fine-Pitch Gears (B6.11—1956), \$2.50  
 Gear Tolerances and Inspection (B6.6—1946), \$1.50  
 Letter Symbols for Gear Engineering (B6.5—1954), \$1.50  
 Spur Gear Tooth Form (B6.1—1932), \$1.00  
 20-Degree Involute Fine-Pitch System for Spur and Helical Gears (B6.7—1956), \$1.50  
 Nomenclature for Gear Tooth Wear and Failure (B6.12—1954), \$1.50  
 System for Straight Bevel Gears (B6.13—1955), \$1.00

#### Piping, Pipe Fittings, and Threads

Air Gaps and Backflow Preventers in Plumbing Systems (A40.4—1942 and A40.6—1943), \$1.50  
 Brass Fittings for Flared Copper Tubes (B16.26—1958), \$1.00  
 Brass or Bronze Flanges and Flanged Fittings for 150 and 300 Lb (B16.24—1953), \$1.00  
 Brass or Bronze Screwed Fittings for 125 Lb (B16.5—1958), \$1.50  
 Brass or Bronze Screwed Fittings for 250 Lb (B16.17—1949; reaffirmed 1953), \$1.00  
 Butt-Welding Ends (B16.25—1958), \$1.00  
 Cast-Brass Solder-Joint Fittings (B16.18—1950), \$1.50  
 Cast-Bronze Solder-Joint Drainage Fittings (B16.23—1959), \$2.00  
 Cast-Iron Pipe Flanges and Flanged Fittings for 25 Lb Maximum Saturated Steam Pressure (B16b2—1931; reaffirmed 1952), \$1.00  
 Cast-Iron Pipe Flanges and Flanged Fittings Class 125 (B16.1—1948; reaffirmed 1953), \$1.50  
 Cast-Iron Pipe Flanges and Flanged Fittings Class 250 (B16b—1944; reaffirmed 1953), \$1.50  
 Cast-Iron Pipe Flanges and Flanged Fittings for Refrigerant Piping, Class 300 (B16.16—1948; reaffirmed 1952), \$1.00  
 Cast-Iron Pipe Flanges and Flanged Fittings for 800 Lb Maximum Hydraulic Pressure (B16b1—1931; reaffirmed 1952), \$1.00  
 Cast-Iron Soil Pipe and Fittings (A40.1—1935), \$2.00  
 Cast-Iron Screwed Fittings for 125 and 250 Lb Maximum Saturated Steam Pressure (B16.4—1949; reaffirmed 1953), \$1.50  
 Cast-Iron Screwed Drainage Fittings (B16.12—1953), \$1.00  
 Face-to-Face and End-to-End Dimensions of Ferrous Valves (B16.10—1957), \$1.50  
 Ferrous Plugs, Bushings, Lock Nuts, With Pipe Threads (B16.14—1949; reaffirmed 1953), \$1.00  
 Malleable-Iron Screwed Fittings, 150 Lb (B16.3—1951; reaffirmed 1958), \$1.50  
 Malleable-Iron Screwed Fittings, 300 Lb (B16.19—1951; reaffirmed 1958), \$1.00  
 Nonmetallic Gaskets for Pipe Flanges (B16.21—1951), \$1.00  
 Pipe Threads (B2.1—1945), \$2.50  
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- AL-ARABI, M.  
Study of existing data for heating of air and water in turbulent flow inside tubes. Paper No. 58-A-298.
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Small-scale burner tests to investigate oil-ash corrosion. Paper No. 58-GTP-19.
- ANDRESEN, JOHN H., JR., AND COLVIN, HENRY F., III  
Philosophy and mechanization of an air-data computer. Paper No. 58-AV-15.
- APPLEBY, E. C.  
Glass-fiber banding of traction-motor armatures. Paper No. 58-A-173.
- ARATA, W. H., JR.  
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- AREF, M. N.  
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- ARNOW, S. M., AND ALLEN, J. L.  
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- BAKER, W. E.  
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